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#### REMARKS

Applicant has carefully reviewed and considered the Office Action mailed on June 5, 2002, and the references cited therewith. Claims 1, 9, 14, 22, 30, and 51 are amended, no claims are canceled, and no claims are added; as a result, claims 1-37 and 51-56 are now pending in this application.

### §112 Rejection of the Claims

Claims 1-2, 5-10, 13-15, 18-23, 26-31, 34-37, 51-52, and 54 were rejected under 35 USC § 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention.

Applicant has amended independent claims 1, 9, 14, 22, 30, and 51 to more clearly set forth embodiments of the subject matter that Applicant regards as inventive. Applicant submits that the amendment is for clarification only, and is not in response to any prior art.

## §102 Rejection of the Claims

Claims 1-2, 14-15, and 53-52 were rejected under 35 USC § 102(e) as being clearly anticipated by Maiti (U.S. 006020024 A).

Applicant does not admit that Maiti is indeed prior art and reserves the right to swear behind this reference at a later date. Nevertheless the Applicant believes that the present invention is distinguishable from the Maiti reference for the following reasons.

The rejection states that, Maiti teaches sputtering and oxidation of a metal layer. The rejection also states that, "The claims as written are broad so that they encompass all evaporation methods and sputtering is a physical thermal evaporation deposition technique."

Maiti appears to show a sputtering process followed by an O<sub>2</sub> anneal (col. 3, line 37), however, Maiti does not show, teach or suggest evaporation depositing a metal layer on the body region using a substantially thermal process and oxidizing the metal layer to form a metal oxide layer on the body region.

In contrast, Applicant's amended independent claims 1, 14, and 51 include evaporation depositing a metal layer on the body region using a substantially thermal process and oxidizing

the metal layer to form a metal oxide layer on the body region.

Because the Maiti reference does not show every element of Applicant's independent claims, a 35 USC § 102 rejection is not supported. Reconsideration and withdrawal of the rejection is respectfully requested with respect to Applicant's independent claims 1, 14, and 51. Additionally, reconsideration and withdrawal of the rejection is respectfully requested with respect to the remaining claims that depend therefrom as depending on allowable base claims.

# §103 Rejection of the Claims

Claims 22-23 and 30-31 were rejected under 35 USC § 103(a) as being unpatentable over Maiti (U.S. 006020024 A) in view of admitted prior art.

Applicant respectfully submits that amended independent claims 22 and 30 are not obvious over Maiti in view of the selected passages from Applicant's background section of the present application. Specifically, as stated above, Applicant respectfully submits that Maiti does not show, teach or suggest evaporation depositing a metal layer on the body region using a substantially thermal process and oxidizing the metal layer to form a metal oxide layer on the body region. The stated selections from Applicant's background section of the present application, as stated in the pending Office Action, do not cure the deficiencies of Maiti.

Because the cited references, either alone or in combination, do not show every element of Applicant's independent claims, a 35 USC § 103(a) rejection is not supported by the references. Reconsideration and withdrawal of the rejection is respectfully requested with respect to Applicant's independent claims 22 and 30. Additionally, reconsideration and withdrawal of the rejection is respectfully requested with respect to the remaining claims that depend therefrom as depending on allowable base claims.

Claims 5-6, 13, 18-19, 26-27, and 34-35 were rejected under 35 USC § 103(a) as being unpatentable over Maiti (U.S. 006020024 A) in view of admitted prior art as applied to claims 1, 7, 9, 14, 20, 22, 28, 30, 36, and 51 above, and further in view of Yano (US 005810923 A).

The rejection states that Yano teaches electron beam evaporation of zirconium oxide at substrate temperatures of 300-700 degrees Celsius. The rejection also states that Yano deposits the zirconium oxide using atomic oxygen.

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AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111

Serial Number: 09/945,535 Filing Date: August 30, 2001

Title: HIGHLY RELIABLE AMORPHOUS HIGH-K GATE OXIDE ZrO2

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Yano appears to show, as stated by the Examiner, depositing of zirconium oxide, not zirconium. However, Yano does not cure the deficiencies of Maiti as described above with respect to amended claims 1, 9, 14, 22, 30, and 51. Further, Applicant is unable to find any reference to atomic oxygen as opposed to oxidizing gases or molecular oxygen  $(O_2)$ .

In contrast, Applicant's amended independent claims 1, 9, 14, 22, 30, and 51 include evaporation depositing a metal layer on the body region using a substantially thermal process and oxidizing the metal layer to form a metal oxide layer on the body region.

Because the cited references, either alone or in combination, do not show every element of Applicant's independent claims, a 35 USC § 103(a) rejection is not supported by the references. Reconsideration and withdrawal of the rejection is respectfully requested with respect to Applicant's claims 5-6, 13, 18-19, 26-27, and 34-35 which depend from independent claims 1, 9, 14, 22, and 30.

### Allowable Subject Matter

Claims 3-4, 11-12, 16-17, 24-25, 32-33, and 53-54 were objected to as being dependent upon a rejected base claim, but were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant respectfully submits that the base claims (1, 9, 14, 22, 30, and 51) have been amended, and are now in condition for allowance pursuant to arguments presented above.

Therefore, no amendments have been made to the claims that have been objected to.

Claims 55-56 were allowed. Applicant acknowledges and thanks the Examiner for allowance of these claims.

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### **Conclusion**

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (612-373-6944) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

KIE Y. AHN ET AL.

By their Representatives,

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<u>CERTIFICATE UNDER 37 CFR 1.8:</u> The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, Washington, D.C. 20231, on this <u>5th</u> day of <u>September</u>, 2002.

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my Moriarty

Signature